

Serial Number: 10/044,401

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: **ENTERED**
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;  
☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



OIIPE

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/10/044,901

DATE: 02/19/2002  
 TIME: 10:56:33

Input Set : A:\PTO\_MS.txt  
 Output Set: N:\CRF3\02192002\J044901.raw

ENTERED

4 <110> APPLICANT: Curtis, Rory A.J.  
 6 <120> TITLE OF INVENTION: 58297, AN AMINO ACID TRANSPORTER AND  
 7 USES THEREFOR  
 9 <130> FILE REFERENCE: MPI2001-010P1R(M)  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/044,901  
 C--> 11 <141> CURRENT FILING DATE: 2002-01-10  
 11 <150> PRIOR APPLICATION NUMBER: 60/262,515  
 W--> 12 <151> PRIOR FILING DATE: 2001-1-18  
 14 <160> NUMBER OF SEQ ID NOS: 8  
 16 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 2476  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Homo sapiens  
 23 <220> FEATURE:  
 24 <221> NAME/KEY: 5'UTR  
 25 <222> LOCATION: (1)...(127)  
 27 <221> NAME/KEY: CDS  
 28 <222> LOCATION: (128)...(1810)  
 30 <221> NAME/KEY: 3'UTR  
 31 <222> LOCATION: (1811)...(2476)  
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 34 cccacgcgtc cgagttctcc gaggttgaag gctcggcctg ctcagagaag gaaactgagg 60  
 35 tccaccgagt tggagaaacc tactcaacac caggactaac ttcttcagtg cttagagtgt 120  
 36 gagaaaa atg gca aat atg aat agt gat tct agg cat ctt ggc acc tct 169  
 37 Met Ala Asn Met Asn Ser Asp Ser Arg His Leu Gly Thr Ser  
 38 1 5 10  
 40 gag gta gat cat gaa aga gat cct gga cct atg aat atc cag ttt gag 217  
 41 Glu Val Asp His Glu Arg Asp Pro Gly Pro Met Asn Ile Gln Phe Glu  
 42 15 20 25 30  
 44 cca tcg gat cta aga tcc aaa agg cct ttc tgt ata gag ccc aca aac 265  
 45 Pro Ser Asp Leu Arg Ser Lys Arg Pro Phe Cys Ile Glu Pro Thr Asn  
 46 35 40 45  
 48 atc gtg aat gtg aat cat gtc att cag agg gtt agt gac cat gcc tct 313  
 49 Ile Val Asn Val Asn His Val Ile Gln Arg Val Ser Asp His Ala Ser  
 50 50 55 60  
 52 gcc atg aac aag aga att cat tac tac agc cgg ctc acc act cct gca 361  
 53 Ala Met Asn Lys Arg Ile His Tyr Tyr Ser Arg Leu Thr Thr Pro Ala  
 54 65 70 75  
 56 gac aag gca ctg att gcc cca gac cat gta gtt cca gct cca gaa gag 409  
 57 Asp Lys Ala Leu Ile Ala Pro Asp His Val Val Pro Ala Pro Glu Glu  
 58 80 85 90  
 60 tgc tat gtg tat agt cca ttg ggc tct gct tat aaa ctt caa agt tac 457

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61 Cys Tyr Val Tyr Ser Pro Leu Gly Ser Ala Tyr Lys Leu Gln Ser Tyr
62 95 100 105 110
64 act gaa gga tac ggt aaa aac acc agt tta gta acc att ttt atg att 505
65 Thr Glu Gly Tyr Gly Lys Asn Thr Ser Leu Val Thr Ile Phe Met Ile
66 115 120 125
68 tgg aat acc atg atg gga aca tct ata cta agc att cct tgg ggc ata 553
69 Trp Asn Thr Met Met Gly Thr Ser Ile Leu Ser Ile Pro Trp Gly Ile
70 130 135 140
72 aaa cag gct gga ttt act act gga atg tgt gtc atc ata ctg atg ggc 601
73 Lys Gln Ala Gly Phe Thr Thr Gly Met Cys Val Ile Ile Leu Met Gly
74 145 150 155
76 ctt tta aca ctt tat tgc tgc tac aga gta gtg aaa tca cgg act atg 649
77 Leu Leu Thr Leu Tyr Cys Cys Tyr Arg Val Val Lys Ser Arg Thr Met
78 160 165 170
80 atg ttt tca ttg gat acc act acc tgg gaa tat cca gat gtc tgc aga 697
81 Met Phe Ser Leu Asp Thr Thr Thr Trp Glu Tyr Pro Asp Val Cys Arg
82 175 180 185 190
84 cat tat ttc ggc tcc ttt ggg cag tgg tcg agt ctc ctc ttc tcc ttg 745
85 His Tyr Phe Gly Ser Phe Gly Gln Trp Ser Ser Leu Leu Phe Ser Leu
86 195 200 205
88 gtg tct ctc att gga gca atg ata gtt tat tgg gtg ctt atg tca aat 793
89 Val Ser Leu Ile Gly Ala Met Ile Val Tyr Trp Val Leu Met Ser Asn
90 210 215 220
92 ttt ctt ttt aat act gga aag ttt att ttt aat ttt att cat cac att 841
93 Phe Leu Phe Asn Thr Gly Lys Phe Ile Phe Asn Phe Ile His His Ile
94 225 230 235
96 aat gac aca gac act ata ctg agt acc aat aat agc aac cct gtg att 889
97 Asn Asp Thr Asp Thr Ile Leu Ser Thr Asn Asn Ser Asn Pro Val Ile
98 240 245 250
100 tgt cca agt gcc ggg agt gga ggc cat cct gac aac agc tct atg att 937
101 Cys Pro Ser Ala Gly Ser Gly Gly His Pro Asp Asn Ser Ser Met Ile
102 255 260 265 270
104 ttc tat gcc aat gac aca gga gcc caa cag ttt gaa aag tgg tgg gat 985
105 Phe Tyr Ala Asn Asp Thr Gly Ala Gln Gln Phe Glu Lys Trp Trp Asp
106 275 280 285
108 aag tcc agg aca gtc ccc ttt tat ctt gta ggg ctc ctc ctc cca ctg 1033
109 Lys Ser Arg Thr Val Pro Phe Tyr Leu Val Gly Leu Leu Leu Pro Leu
110 290 295 300
112 ctc aat ttc aag tct cct tca ttt ttt tca aaa ttt aat atc cta ggc 1081
113 Leu Asn Phe Lys Ser Pro Ser Phe Phe Ser Lys Phe Asn Ile Leu Gly
114 305 310 315
116 aca gtg tct gtc ctt tat ttg att ttc ctt gtc acc ttt aag gct gtt 1129
117 Thr Val Ser Val Leu Tyr Leu Ile Phe Leu Val Thr Phe Lys Ala Val
118 320 325 330
120 cgc ttg gga ttt cat ttg gaa ttt cat tgg ttt ata cca aca gaa ttt 1177
121 Arg Leu Gly Phe His Leu Glu Phe His Trp Phe Ile Pro Thr Glu Phe
122 335 340 345 350
124 ttt gta cca gag ata aga ttt cag ttt cca cag ctg act gga gtg ctt 1225
125 Phe Val Pro Glu Ile Arg Phe Gln Phe Pro Gln Leu Thr Gly Val Leu

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126          355          360          365
128 acc ctt gct ttt ttt att cat aat tgt atc atc aca ctc ttg aag aac 1273
129 Thr Leu Ala Phe Phe Ile His Asn Cys Ile Ile Thr Leu Leu Lys Asn
130          370          375          380
132 aac aag aaa caa gaa aac aat gtg agg gac ttg tgc att gct tat atg 1321
133 Asn Lys Lys Gln Glu Asn Asn Val Arg Asp Leu Cys Ile Ala Tyr Met
134          385          390          395
136 ctg gtg aca tta act tat ctc tat att gga gtc ctg gtt ttt gct tca 1369
137 Leu Val Thr Leu Thr Tyr Leu Tyr Ile Gly Val Leu Val Phe Ala Ser
138          400          405          410
140 ttt cct tca cca cca tta tcc aaa gat tgt att gag cag aat ttt tta 1417
141 Phe Pro Ser Pro Pro Leu Ser Lys Asp Cys Ile Glu Gln Asn Phe Leu
142 415          420          425          430
144 gac aac ttc cct agc agt gac acc ctg tcc ttc att gca agg ata ttc 1465
145 Asp Asn Phe Pro Ser Ser Asp Thr Leu Ser Phe Ile Ala Arg Ile Phe
146          435          440          445
148 ctg ctg ttc cag atg atg act gta tac cca ctc tta ggc tac ctg gct 1513
149 Leu Leu Phe Gln Met Met Thr Val Tyr Pro Leu Leu Gly Tyr Leu Ala
150          450          455          460
152 cgt gtc cag ctt ttg ggc cat atc ttc ggt gac att tat cct agc att 1561
153 Arg Val Gln Leu Leu Gly His Ile Phe Gly Asp Ile Tyr Pro Ser Ile
154          465          470          475
156 ttc cat gtg ctg gtt ctt aat cta att att gtg gga gct gga gtg atc 1609
157 Phe His Val Leu Val Leu Asn Leu Ile Ile Val Gly Ala Gly Val Ile
158          480          485          490
160 atg gcc tgt ttc tac cca aac ata gga ggg atc ata aga tat tca gga 1657
161 Met Ala Cys Phe Tyr Pro Asn Ile Gly Gly Ile Ile Arg Tyr Ser Gly
162 495          500          505          510
164 gca gca tgt gga ctg gcc ttt gta ttc ata tac cca tct ctc atc tat 1705
165 Ala Ala Cys Gly Leu Ala Phe Val Phe Ile Tyr Pro Ser Leu Ile Tyr
166          515          520          525
168 ata att tcc ctc cac caa gaa gag cgt ctg aca tgg cct aaa tta atc 1753
169 Ile Ile Ser Leu His Gln Glu Glu Arg Leu Thr Trp Pro Lys Leu Ile
170          530          535          540
172 ttc cac gtt ttc atc atc att ttg ggc gtg gct aac ctg att gtt cag 1801
173 Phe His Val Phe Ile Ile Ile Leu Gly Val Ala Asn Leu Ile Val Gln
174          545          550          555
176 ttt ttt atg tgaaatacct caactgtttt tttcaagagc tctcatgata 1850
177 Phe Phe Met
178          560
180 ttttgagcct tgacaacagt tctatataaa ttcacttgta aatgctgctg ttgtgtaatt 1910
181 ctaaatatatt tctaagataa tttgaaagca agggaaatag tggcccctta atgagtattt 1970
182 ttttattggg gtggggaaaag gggcaaaaag aatgatctta gtgtcttaac ctttctcata 2030
183 ttaactcacc tctttattct gtggtctttt ctgaatagaa atgtatgcc taggaagaaa 2090
184 tcatgctggg ttttgctttt agagataaaa ggtggtggat ttattttgcc tgcagtaaaag 2150
185 attctcaggg tgtcagagca gcatattgtc aaatcctgct tctgttttat gtttcagtgt 2210
186 attcactttc attttcttac ttactagacc atttctgcag tttgccccaa cctctactgt 2270
187 ttgggacagt aagccaaata cctcattttt aaaaagaagt tttcatggca tcagtgttaa 2330
188 taaagtacat ttttaactga gtcttaatct ctatttgaag aaaaagtaga gacaaaagta 2390

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189 atgtcaatgt aatccccagg atcatgaaat gtatacaaaa taaataaagt aggagagttt 2450
190 gttgctgaaa aaaaaaaaaa aaaaaa 2476
192 <210> SEQ ID NO: 2
193 <211> LENGTH: 561
194 <212> TYPE: PRT
195 <213> ORGANISM: Homo sapiens
197 <400> SEQUENCE: 2
198 Met Ala Asn Met Asn Ser Asp Ser Arg His Leu Gly Thr Ser Glu Val
199 1 5 10 15
200 Asp His Glu Arg Asp Pro Gly Pro Met Asn Ile Gln Phe Glu Pro Ser
201 20 25 30
202 Asp Leu Arg Ser Lys Arg Pro Phe Cys Ile Glu Pro Thr Asn Ile Val
203 35 40 45
204 Asn Val Asn His Val Ile Gln Arg Val Ser Asp His Ala Ser Ala Met
205 50 55 60
206 Asn Lys Arg Ile His Tyr Tyr Ser Arg Leu Thr Thr Pro Ala Asp Lys
207 65 70 75 80
208 Ala Leu Ile Ala Pro Asp His Val Val Pro Ala Pro Glu Glu Cys Tyr
209 85 90 95
210 Val Tyr Ser Pro Leu Gly Ser Ala Tyr Lys Leu Gln Ser Tyr Thr Glu
211 100 105 110
212 Gly Tyr Gly Lys Asn Thr Ser Leu Val Thr Ile Phe Met Ile Trp Asn
213 115 120 125
214 Thr Met Met Gly Thr Ser Ile Leu Ser Ile Pro Trp Gly Ile Lys Gln
215 130 135 140
216 Ala Gly Phe Thr Thr Gly Met Cys Val Ile Ile Leu Met Gly Leu Leu
217 145 150 155 160
218 Thr Leu Tyr Cys Cys Tyr Arg Val Val Lys Ser Arg Thr Met Met Phe
219 165 170 175
220 Ser Leu Asp Thr Thr Thr Trp Glu Tyr Pro Asp Val Cys Arg His Tyr
221 180 185 190
222 Phe Gly Ser Phe Gly Gln Trp Ser Ser Leu Leu Phe Ser Leu Val Ser
223 195 200 205
224 Leu Ile Gly Ala Met Ile Val Tyr Trp Val Leu Met Ser Asn Phe Leu
225 210 215 220
226 Phe Asn Thr Gly Lys Phe Ile Phe Asn Phe Ile His His Ile Asn Asp
227 225 230 235 240
228 Thr Asp Thr Ile Leu Ser Thr Asn Asn Ser Asn Pro Val Ile Cys Pro
229 245 250 255
230 Ser Ala Gly Ser Gly Gly His Pro Asp Asn Ser Ser Met Ile Phe Tyr
231 260 265 270
232 Ala Asn Asp Thr Gly Ala Gln Gln Phe Glu Lys Trp Trp Asp Lys Ser
233 275 280 285
234 Arg Thr Val Pro Phe Tyr Leu Val Gly Leu Leu Leu Pro Leu Leu Asn
235 290 295 300
236 Phe Lys Ser Pro Ser Phe Phe Ser Lys Phe Asn Ile Leu Gly Thr Val
237 305 310 315 320
238 Ser Val Leu Tyr Leu Ile Phe Leu Val Thr Phe Lys Ala Val Arg Leu
239 325 330 335

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Output Set: N:\CRF3\02192002\J044901.raw

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240 Gly Phe His Leu Glu Phe His Trp Phe Ile Pro Thr Glu Phe Phe Val
241          340          345          350
242 Pro Glu Ile Arg Phe Gln Phe Pro Gln Leu Thr Gly Val Leu Thr Leu
243          355          360          365
244 Ala Phe Phe Ile His Asn Cys Ile Ile Thr Leu Leu Lys Asn Asn Lys
245          370          375          380
246 Lys Gln Glu Asn Asn Val Arg Asp Leu Cys Ile Ala Tyr Met Leu Val
247 385          390          395          400
248 Thr Leu Thr Tyr Leu Tyr Ile Gly Val Leu Val Phe Ala Ser Phe Pro
249          405          410          415
250 Ser Pro Pro Leu Ser Lys Asp Cys Ile Glu Gln Asn Phe Leu Asp Asn
251          420          425          430
252 Phe Pro Ser Ser Asp Thr Leu Ser Phe Ile Ala Arg Ile Phe Leu Leu
253          435          440          445
254 Phe Gln Met Met Thr Val Tyr Pro Leu Leu Gly Tyr Leu Ala Arg Val
255          450          455          460
256 Gln Leu Leu Gly His Ile Phe Gly Asp Ile Tyr Pro Ser Ile Phe His
257 465          470          475          480
258 Val Leu Val Leu Asn Leu Ile Ile Val Gly Ala Gly Val Ile Met Ala
259          485          490          495
260 Cys Phe Tyr Pro Asn Ile Gly Gly Ile Ile Arg Tyr Ser Gly Ala Ala
261          500          505          510
262 Cys Gly Leu Ala Phe Val Phe Ile Tyr Pro Ser Leu Ile Tyr Ile Ile
263          515          520          525
264 Ser Leu His Gln Glu Glu Arg Leu Thr Trp Pro Lys Leu Ile Phe His
265          530          535          540
266 Val Phe Ile Ile Ile Leu Gly Val Ala Asn Leu Ile Val Gln Phe Phe
267 545          550          555          560
268 Met
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273 <211> LENGTH: 1683
274 <212> TYPE: DNA
275 <213> ORGANISM: Homo sapiens
277 <220> FEATURE:
278 <221> NAME/KEY: CDS
279 <222> LOCATION: (1)...(1683)
281 <400> SEQUENCE: 3
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283 Met Ala Asn Met Asn Ser Asp Ser Arg His Leu Gly Thr Ser Glu Val
284 1          5          10          15
286 gat cat gaa aga gat cct gga cct atg aat atc cag ttt gag cca tcg 96
287 Asp His Glu Arg Asp Pro Gly Pro Met Asn Ile Gln Phe Glu Pro Ser
288          20          25          30
290 gat cta aga tcc aaa agg cct ttc tgt ata gag ccc aca aac atc gtg 144
291 Asp Leu Arg Ser Lys Arg Pro Phe Cys Ile Glu Pro Thr Asn Ile Val
292          35          40          45
294 aat gtg aat cat gtc att cag agg gtt agt gac cat gcc tct gcc atg 192
295 Asn Val Asn His Val Ile Gln Arg Val Ser Asp His Ala Ser Ala Met
296          50          55          60

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## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/044,901

DATE: 02/19/2002

TIME: 10:56:34

Input Set : A:\PTO\_MS.txt

Output Set: N:\CRF3\02192002\J044901.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:12 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD